

'Feeding Ecology and Foods of Kererü in a Fragmented Landscape'

Overview

In 2003 a Lincoln University Masters student researched the feeding ecology of kererü in Whakaraupö / Lyttelton Harbour.

Aim

To investigate the feeding ecology and food preferences of kererü and their role in seed dispersal in a fragmented landscape to provide an understanding of the needs of kererü in Whakaraupö / Lyttelton Harbour and help towards determining methods for increasing their numbers.

Objectives

- Determine the use, preference and availability of exotic and native plant species for feeding by kererü.
- Determine the seasonal variations in foods of the kererü.
- Determine the extent of dispersal of seeds and where they are being dispersed.

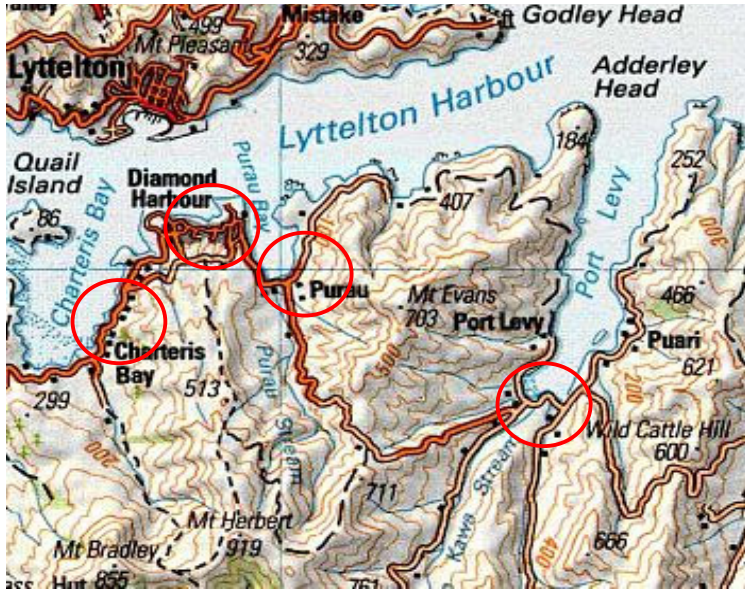
Study Site

Four study areas within Whakaraupö / Lyttelton Harbour were selected; Charteris Bay, Diamond Harbour, Purau Bay and Port Levy. These areas are fragmented landscapes consisting of small, regenerating, native forest remnants, native scrub, exotic plants, urban areas, agriculture and residential.

Figure 1: Map of Whakaraupö / Lyttelton Harbour.



Figure 2: Map of the four study areas within Whakaraupö / Lyttelton Harbour.



Methodology

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| Vegetation Survey | A vegetation survey of the four sites in the study area was carried out. |
| Feeding Observations | A search was carried out at each area in a systematic manner, pausing in areas, locating birds. If no birds were located in an area after five minutes looking then the observer moved on to the next location. Once a bird was located an initial observation will determine if the bird is feeding. If, after five minutes, it was not feeding then the observer moved on. This |

is because kererū generally only spend 25% of their day feeding and are quite sedentary birds (Higgins and Davies, 1996). If the bird was feeding then the following was recorded for each observation made (modified from Powlesland et al. 1995).

Observer:	Initials
Time:	24hr clock
Study site, transect and location:	Name of study site, transect and precise locality. Location of bird in relation to canopy (from O'Donnell and Dilks 1988).
Habitat type:	Dominant canopy species, whether open or closed canopy.
Number of birds:	In view
Food species:	That the bird is eating
Food type:	Category of food – leaf bud, leaf, flower bud, flower, unripe fruit, ripe fruit, other.
Time spent eating:	On each separate feeding observation – i.e. each separate food type.
Amount of food taken:	Number of items of each food type taken in one observation

Preliminary Results

Although the information has not been extensively analysed a brief analysis of this data indicates that:

- Kererü are generalists, using both native and exotic plant species when available;
- Use of plant species on Horomaka / Banks Peninsula is seasonal and relates to change in plant phenology; and
- The use of exotic species such as tree lucerne and broom is currently important for kererü.

Figure 3: The monthly contribution of fruit and other food sources to the kererū diet (without specifying what plant species).

